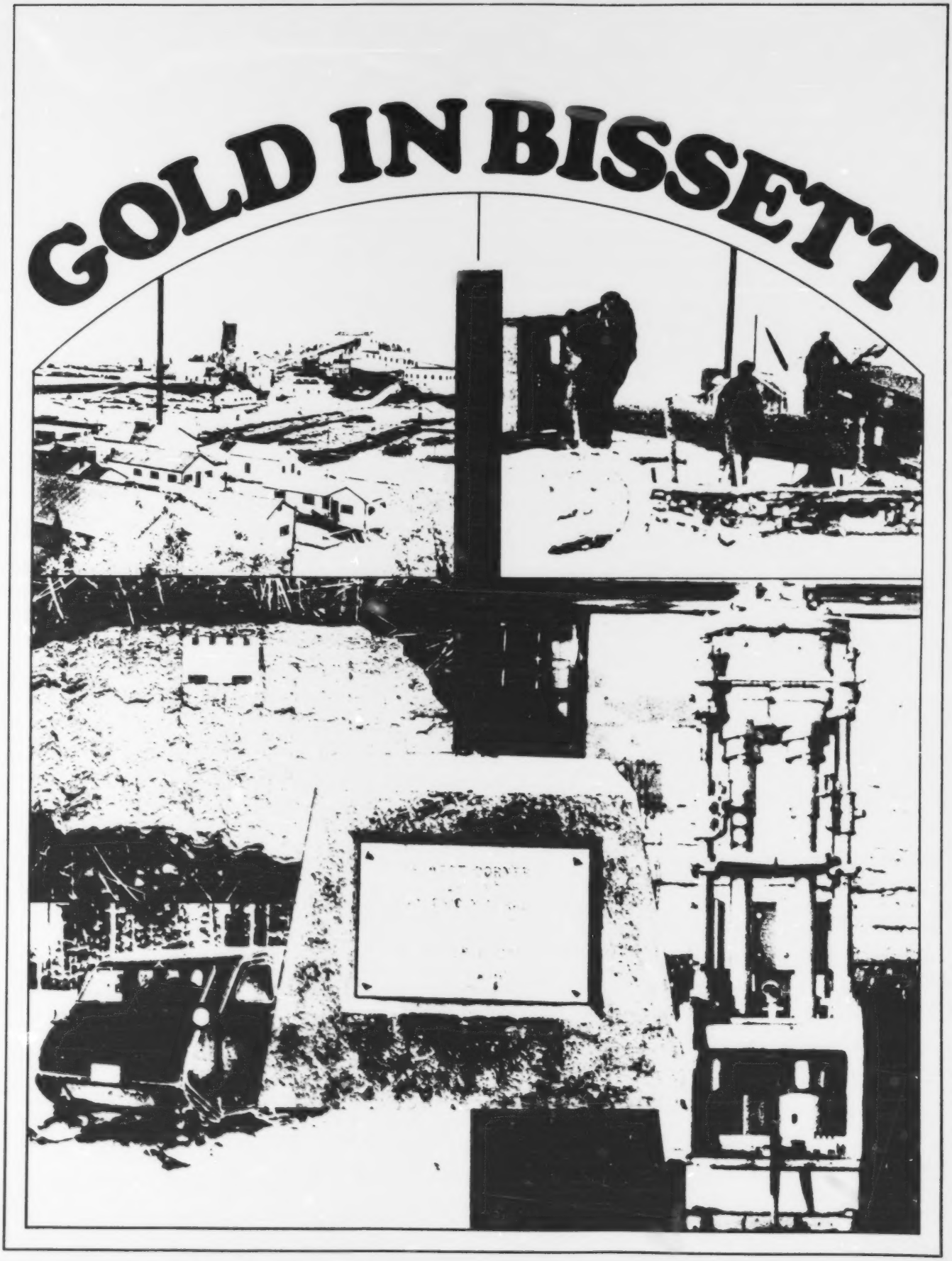
GOLD IN BISSETT



Acknowledgements

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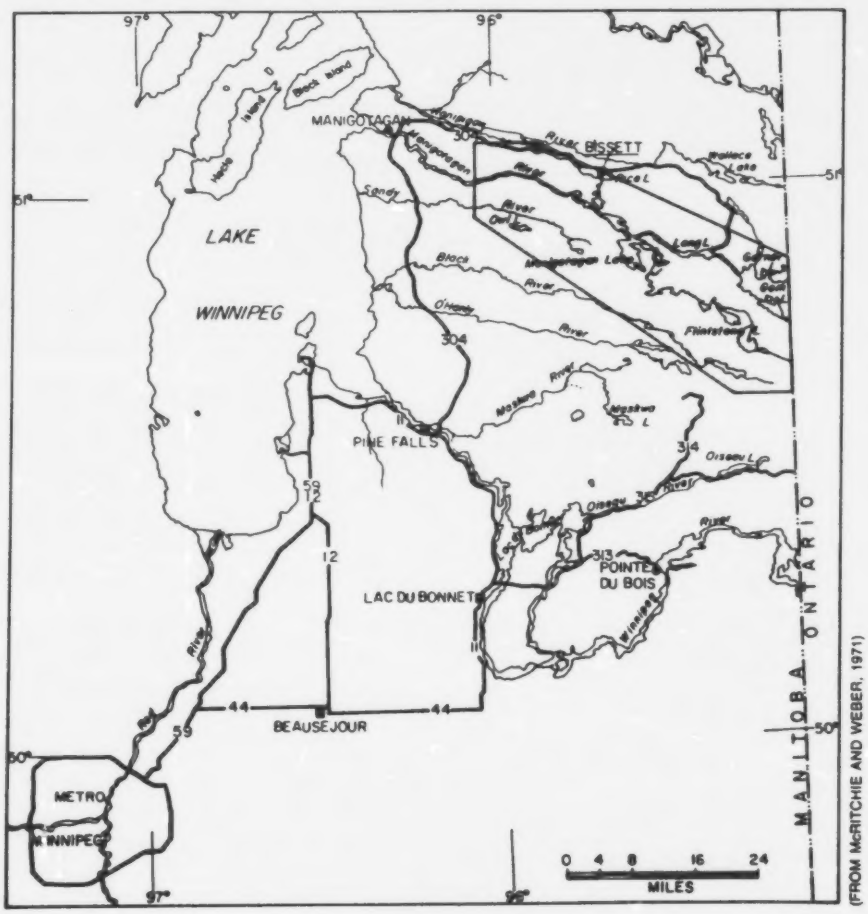
Cover Photographs

1. *Two stamp gold mill used on the Goldfield property, 1915. Field trip stop #8.* (PHOTO W.K. MYSYK, 1986)
2. *Site of discovery post. The plaque reads as follows: "Northwest corner post of the San Antonio Mineral Claim staked on May 17, 1911 by Alexander Desautels." Field trip stop #8.* (MANITOBA ENERGY AND MINES, MINING ENGINEERING)
3. *Tractor and Aeroplane at Bissett, Manitoba, 1935.* (CANADIAN MINING JOURNAL VOL. 56, 1935, P. 3)
4. *San Antonio Mine circa 1940.* (PHOTO FROM MANITOBA ENERGY AND MINES)
5. *Kink band folding in chloritized mafic volcanic rock near Beresford Lake. Field trip stop #16.* (PHOTO W.K. MYSYK, 1986)
6. *Currie's Transportation Ltd. Bombardier, 1951.* (PROVINCIAL ARCHIVES OF MANITOBA) (PHOTO REV. E. CHRISTIE)



(FROM McRITCHIE AND WEBER, 1971)

LOCATION MAP

OF RICE LAKE, GREENSTONE BELT, SOUTHEASTERN MANITOBA.

GEOLOGICAL AND HISTORICAL FEATURES OF THE BISSETT, MANITOBA AREA GOLD CAMP

The purpose of this brochure is to provide a practical overview of the geological and historical features of the Bissett area gold camp for the general public.

This project was funded under the Canada-Manitoba Mineral Development Agreement, a five-year, $24.7 million program aimed at diversifying and strengthening the Manitoba mining industry.

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GOLD IN BISSETT

Introduction

Today's visitor to the Bissett area treasures the wildlife, tranquility and outdoor adventure. But it was the lure of a golden treasure that first drew waves of travellers to the shores of Wanipigow, Wallace, and Beresford Lakes. The eternal quest for precious metals was the motive behind exploration of half the world — and Bissett was no exception. The modern visitor to the Bissett region follows in the footsteps of Manitoba's first gold rush.

It has been over 70 years since the first traces of the valuable yellow metal were found on the shore of Rice Lake. But 2.7 billion years had elapsed since the gold-bearing veins filled fractures in the volcanic crust of the primitive earth. Nomadic Cree hunters and a succession of early fur traders had probably walked over the rich veins of the Bissett area without a passing glance. Early in this century, however, the history of Bissett was to change dramatically.

The discovery of gold, located in what is now part of the residential area of the village of Bissett, resulted in a minor gold rush.

San Antonio Gold Mine

A popular Indian legend in the Bissett area tells of an unusual, fair-skinned blonde youth from the north, who long, long ago visited the Cree on the east side of Lake Winnipeg. His visit brought good hunting, and the Cree, believing him to be the messenger of Manitou, adopted him and named him Pigowi Manitou. Now there lived in this village a most beautiful maiden called Etomami. While she had many suitors, including amongst them Manigotagan, she loved only the fair-haired Pigowi Manitou. After the appropriate courtship, the two lovers were married. Pigowi Manitou and Etomami travelled to the interior to gather wild rice. Manigotagan, the spurned and jealous suitor, followed the couple. He ambushed Pigowi Manitou at Rice Lake where he struck him down. The spot where the blonde head fell was marked forever after with threads of yellow running through the rock.

The legend notwithstanding, the first scientific evidence of gold potential in the Rice Lake belt came to light in a 1900 Geological Survey of Canada report by J.B. Tyrell, one of Canada's foremost early geologists. But more than a decade would pass before Tyrell's report would be substantiated by the discovery of a gold deposit in the region.

E.A. Pelletier, an inspector in the Royal North West Mounted Police with an interest in geology, started prospecting during his patrols in southeastern Manitoba. As his interest in gold exploration increased, he began prospecting near Norway House and later Manigotagan. It is believed that during his stay in Manigotagan he came into contact with Duncan Twohearts, a local Indian who knew the Rice Lake region well. Pelletier shared his keen interest in geology and gold prospecting with Twohearts. It isn't clear when or where Twohearts met

(CANADIAN MINING JOURNAL VOL. 55, 1934, P. 552)

E.A. Pelletier.

up with Pelletier again, but there is no doubt that a meeting did take place and Twohearts had several rock samples to show Pelletier. The samples contained gold.

In March 1911, Twohearts led Pelletier to Rice Lake where a boulder of rusty quartz contained pure gold. The showing was impressive enough for Pelletier to stake a claim. Back in Winnipeg, Pelletier recorded the claim on March 6, 1911, and named it Gabrielle, after a lady friend. He returned to Rice Lake and soon established the San Antonio, Ross Fraction, and Island Fraction claims.

News of Pelletier's discovery spread far and wide. Coupled with the earlier report by Tyrell and spurred on by rumours of great discoveries, an influx of prospectors poured into the Rice Lake region. Exploration activity accelerated and spread east and west along the gold-bearing belt of volcanic rocks.

By 1912, another Geological Survey of Canada team arrived in Bissett to examine the Rice Lake area in more

detail. Meanwhile, Pelletier set up a small stamp mill at the Gabrielle claim to process a limited amount of high grade ore. Unfortunately for Pelletier, the results were disappointing and only a meager amount of gold was recovered from the ore.

(PHOTO W.K. MYSYK, 1986)

The plaque reads as follows: "This Mill was erected by E.A. Pelletier in August, 1912. Brought up Lake Winnipeg to Manigotagan, across 28 portages to Rice Lake. A small amount of ore was taken from the original shaft and crushed by hand before entering the mill. Only a small amount of gold was recovered but this was the first gold mill erected in the Province of Manitoba." Field trip stop #7.

Attempts at securing financing for further development of his mining claims proved unsuccessful, and Pelletier left Manitoba and gold prospecting to work in Brazil, South America as an escort to immigrants.

Nevertheless, small milling operations were attempted on other properties in the area, including the Gold Field in 1914 and the Gold Pan in 1915. Exploration and development activity decreased slightly following the outbreak of the First World War, then increased after the war. The rumour of a significant gold discovery in the Red Lake region of northwestern Ontario in 1926 drew people away from the Rice Lake area for a short time.

But by 1922, attention was once more focussed on the San Antonio group of claims. J.D. Perrin of Winnipeg had acquired an option to purchase the property and performed a surface examination of the veins. Disappointed by the results, he dropped his option to acquire the property. However, Perrin returned three years later to option the San Antonio group of claims on behalf of a Toronto mining promoter.

Consulting geologist J.A. Reid, sent out to examine the gold showings, could not have found the going easy. More than half the distance between Winnipeg and Bissett is through the rugged terrain of the Precambrian Shield. The Lake Winnipeg-Wanipigow River system served as a canoe route in summer and as an ice route in winter. Reid would encounter over 40 portages along the way.

The work performed by Reid showed promise and the Wanipigow Syndicate was formed to commence underground development of the site. Preliminary work opened up the gold showing to 164 feet by a shaft and lateral work. Approximately two years later, on July 28, 1927, Wanipigow Mines Ltd. was incorporated. But the directors of the company lost faith in the property and Perrin stepped in to guarantee to refund $120,000 to the Wanipigow Syndicate.

The first known use of float equipped aircraft for passengers in Manitoba occurred in 1927 when consulting geologist J.A. Reid was examining the San Antonio property for a second time and was required in Toronto on short notice. Canoe travel was obviously too slow and an aircraft was sent to fly him out of the bush.

A few months later, on September 16th, Wanipigow Mines Ltd. underwent a change of name to become San Antonio Mines Ltd. After refinancing, the head office was moved to Winnipeg from Toronto and work, under the supervision of D.J. Kennedy, continued on the property.

At about the same time, several other mining operations were underway in the Rice Lake area. Substantial gold production commenced in 1927 when Central Manitoba Mines began operation of the Kitchener Mine at Wadhope, several kilometers northeast of Long Lake. The Tene, Growler and Hope veins were put into production soon after.

Development of the gold properties required transportation methods which could accommodate the necessary bulky and heavy mining equipment and related material. The rough terrain offered a serious challenge to the mining operators' ingenuity. One unique attempt was the creation of a transportation mode known as "The Alligator." This barge-like, steam-powered vessel had skids underneath and a winch at the front to pull it along on the numerous portages. While it fared well enough in water, on land with the heavy milling equipment (including an ore bucket and conical crusher) on the deck and towing a cookhouse-come-bunkhouse behind, the Alligator was more likely to uproot the trees instead of being pulled forward. This unusual vessel traversed 15 portages on the Manigotagan River before it had to be abandoned near Joe Steels Portage, where the remains may still be seen today.

The stock market crash of 1929 stopped the flow of investment capital and active exploration in the Rice Lake greenstone belt plummeted. A period of instability in world financial mar-

(CANADIAN MINING JOURNAL VOL. 57, 1936, P. 206)

Portaging a stream in the Rice Lake area of Manitoba 1936.

kets occurred when Britain and the United States abandoned the gold standard in 1931 and 1933, respectively. Exploration activity slowed in this uncertain economic environment.

The San Antonio mining company struggled on in face of financial crises. With little new money coming in, and the discovery of one of the highest grade shoots to date, workers were forced to use whatever means came to hand. Their answer to a shortage of funds for rails needed to reach the new rich #16 vein, was to develop the initial 50 feet with wheelbarrows.

Inadequate financing continued to hamper development of the mine until 1931 when the San Antonio Mines Ltd. was refinanced yet again and incorporated to become the now famous San Antonio Gold Mines Ltd. With substantial ore reserves delineated, the company would move into the production phase.

(PROVINCIAL ARCHIVES OF MANITOBA) (PHOTO REV E CHRISTIE)

Currie's Transportation Ltd. Bombardier, 1951.

A New Era

In spite of the fact the "Dirty 30's" were taking their toll throughout the western world, the mining region in Bissett began to prosper during this period. New transportation links, the introduction of hydro-electric power to the area, and increased expansion of mining claims created just the right environment for growth.

Boat service and road development made it easier for the influx of Finnish, Swedish, Icelandic, Métis and Ukrainian people to settle and raise families in and around Bissett. Supplies could now be transported by lake boat from Winnipeg to the Wanipigow River and then by truck over the two-mile portage to a river boat, which travelled 27 miles up the Wanipigow River, across Wanipigow Lake and along the Upper Wanipigow River to Currie's Landing. The supplies were then moved by road into Bissett. The one-way trip took 20 hours instead of the days and weeks of bygone years.

Meanwhile, Western Canada Airways had been providing mail service from Long Lake to Lac du Bonnet since 1927. By 1931, Central Airways Ltd. introduced twice weekly mail service between Great Falls, Wadhope and Bissett.

Don Currie formed Currie Transportation Ltd. upon obtaining a large freight contract with San Antonio Gold Mines. Tractor trains helped open up the area carrying freight along a winter road from Pine Falls until 1957 when an all-weather road was completed.

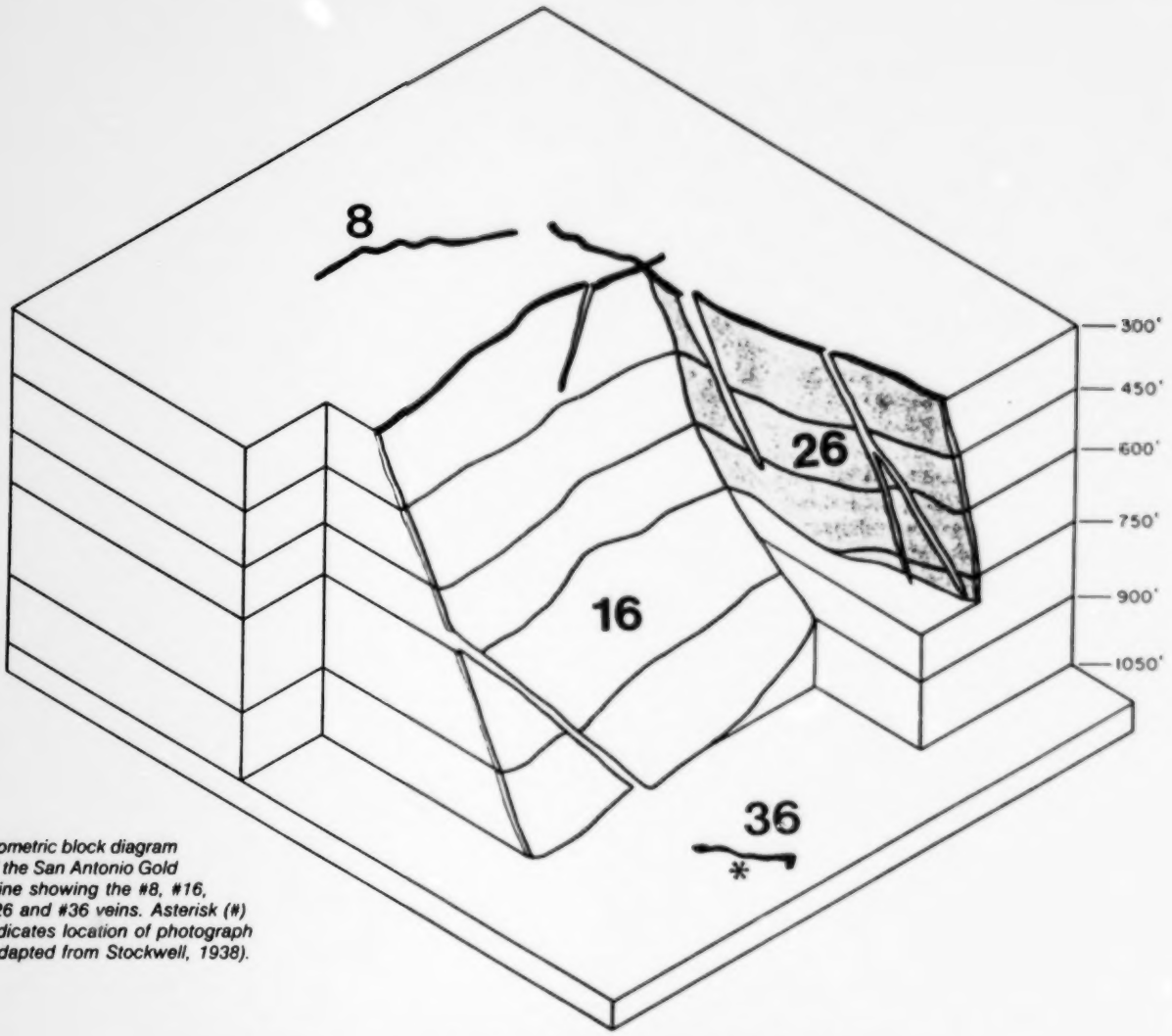
A hydro line from Great Falls brought electrical power to the San Antonio mine. In May, 1932, the electrified gold mill began processing 150 tons per day (tpd). The operation was profitable from the beginning, enabling expansion of the mill capacity to 250 tpd in one short year. In 1934, the San Antonio became the first gold mining company in Manitoba to pay a dividend to its shareholders.

The United States increased the price of gold from $20 to $35 an ounce in 1934. As a result, gold exploration in the Rice Lake belt and elsewhere in Canada expanded, while the general economy continued to labour under the Great Depression. Other mining concerns in the region also began to prosper in this timeframe. The Oro Grande Mine commenced production in 1932, followed by the Diana in 1934, and the Gunnar in 1936.

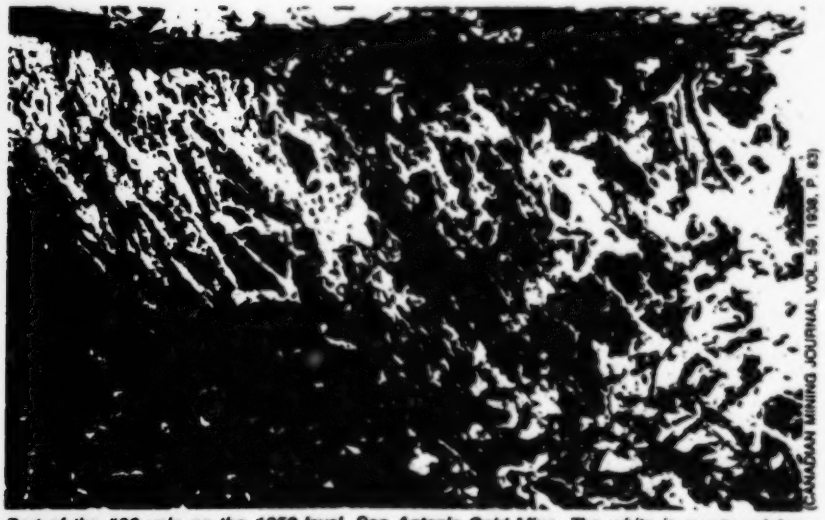
This improved financial health was reflected in the town of Bissett. A community hall was built in 1934 to house the Rice Lake Community Club. Activities included tennis, movies, badminton and special sports days. Membership fees were $2.00 a month and the entire family had access to all the club facilities and free admission to the weekly motion picture shows. The first two-sheet curling rink was built in the summer of the following year and was ready for the 1935-36 curling season. The woodframe building was not heated and cracks in the walls allowed snow to sift onto the ice on stormy nights. Curlers were extremely hardy and would endure temperatures which could drop to -30°C. Games would only be disrupted when fog obscured the opposite end of play. Still, the game was popular and a third sheet of ice was added several years later.

One highlight of the year in Bissett was the July 1st celebration organized by the community club. What had originally started out as a community picnic was eventually expanded into a mini-sports day. There were special children's races and events in the morning, followed by water sports, mining contests — drilling, hand mucking, mucking machine operation — as well as other fashionable pastimes such as pie-eating, nail driving, beer drinking and tug-of-war. The children enjoyed free ice cream cones, boat rides and a merry-go-round. For the adults, there were the usual fundraising booths like bingo, crown and anchor, and others. The day ended with an evening baseball game followed by a dance.

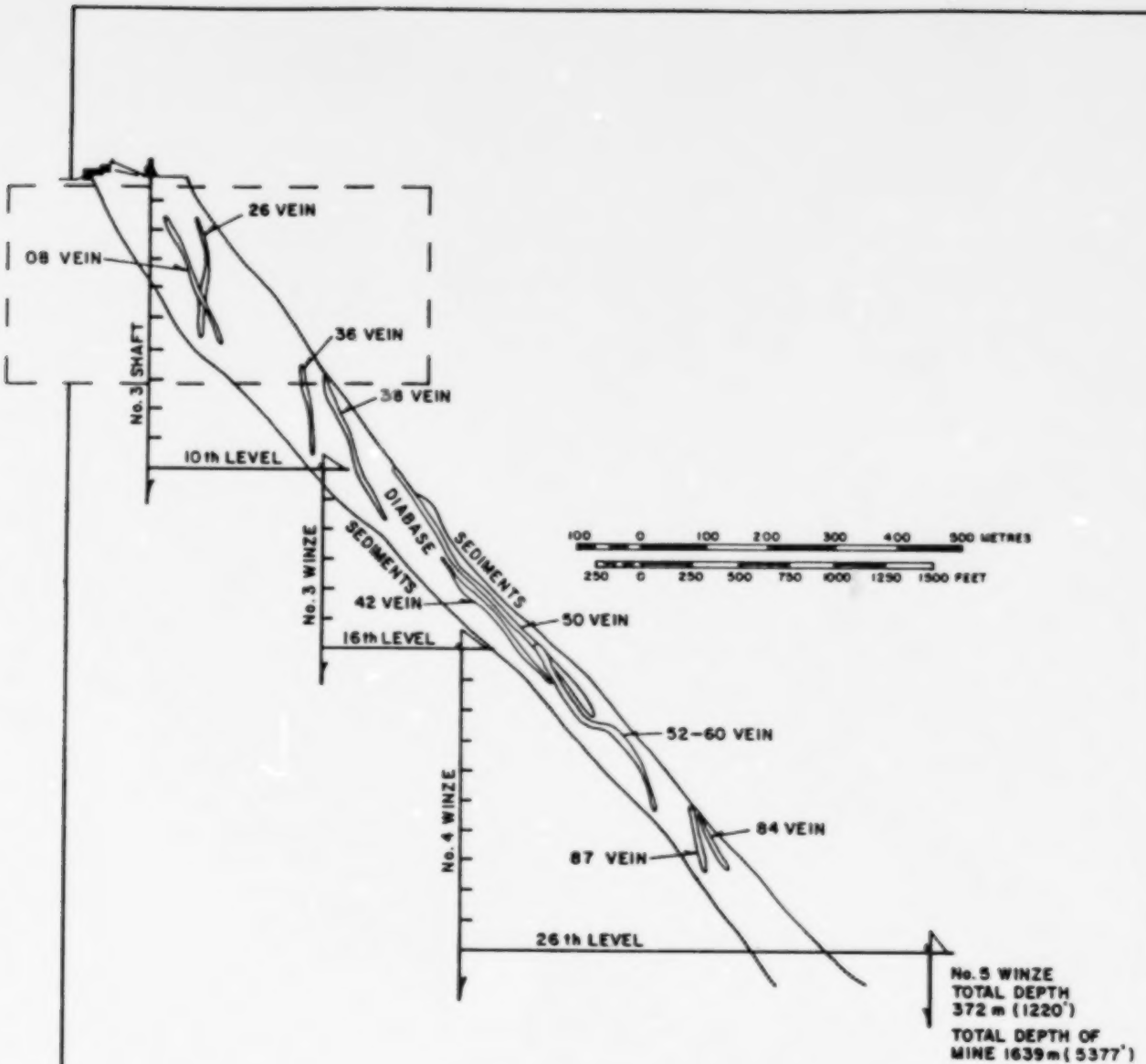
Growth of the San Antonio continued with the acquisition of adjacent land and an increased mill capacity of 350 tpd. Mine development progressed with discovery of the produc-



Isometric block diagram of the San Antonio Gold Mine showing the #8, #16, #26 and #36 veins. Asterisk (*) indicates location of photograph (adapted from Stockwell, 1938).



Part of the #36 vein on the 1050 level, San Antonio Gold Mine. The white is quartz veining which contains pyrite and gold. Development widths ran from five to six feet and grade about 0.35 oz. gold/ton.



Diagrammatic cross section through the San Antonio Gold Mine, looking west. The gold-bearing veins occur in a sheet of diabase sandwiched between metasediments. Vertical distance between levels averages 45.72 m (150 feet). The rectangle indicated by the dashed lines at the top of the diagram is the location of the block diagram on the previous page (adapted from Stewart, 1980).

(PROVINCIAL ARCHIVES OF MANITOBA) (PHOTO E. LA BOSSIERE)

Adolph Kowalchuk supervising Norm La Bossiere in drilling contest during July 1st celebrations.

(CANADIAN MINING JOURNAL VOL. 55, 1934, P. 78)

No. 2 shaft, San Antonio Gold Mines, Bissett, Manitoba 1934.

tive #26 vein in 1933 and the #36 vein in 1936.

The introduction of daily passenger and express mail air service in 1937 coincided with what was perhaps the single most important discovery in the San Antonio mine: the #38 vein had been drilled on the ninth and tenth levels, raising the ore reserves considerably. Results were encouraging enough to warrant exploration of deeper levels in the mine.

And as the mine's fortunes increased so did the community's support for athletic endeavors. The most popular forms of entertainment in Bissett were baseball and hockey. The local baseball games soon expanded to include competition with visiting teams, particularly on Labour Day weekend. Hockey also gained prominence during these heady days of expansion. The owners of the San Antonio Gold Mine were so enthused with hockey they hired Olympic champion Bobby Benson to organize and coach a team in Bissett. Benson had played as a member of the Winnipeg Falcons during the 1920 Olympic games in Antwerp, Belgium. He imported a few hockey players from Winnipeg to bolster the local team and they were flown into other mining communities in search of competition.

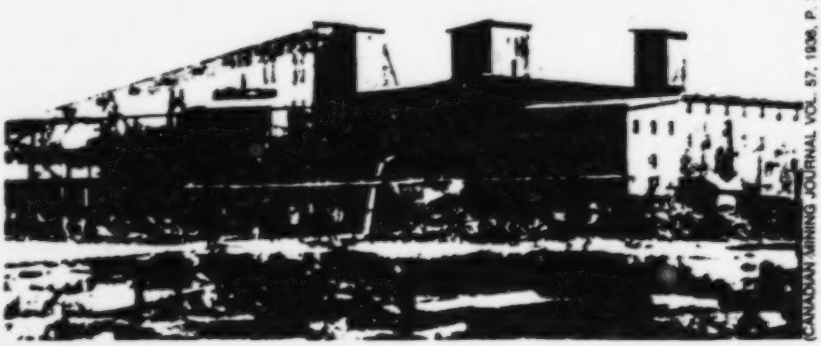
Hopes were high that the team would succeed in competing for the Allen Cup. Although they did manage to advance to the provincial playdowns, the team never did make it to the finals and it was eventually disbanded. But hockey was still popular in the community and it continued to be played within the local three-team league made up of a team from the surface and two teams representing the underground miners.

The year was 1939 and the San Antonio mining company had moved steadily ahead due to the favourable world economic climate and underground development of ore. But the outbreak of war on the European mainland would soon exert a profound influence on gold mining in Canada. The early years of the war effort would profit mining operations in Bissett and elsewhere, but the benefits were short lived.

Great Britain was suffering a minor monetary crisis and was hard pressed to produce the needed revenue to purchase war material from the United States. The Americans had put in place a policy that arms and munitions could not be purchased on credit. All transactions would be "cash up front." Britain turned to the Commonwealth countries for help.

Canada's close proximity to the U.S. and its healthy gold producing sector made it natural to offer assistance in the financing of the war effort overseas. At the same time that Canada increased gold production, the Canadian government instituted a 10 per cent devaluation of the Canadian dollar. The American and Canadian dollars had been at par and the outcome of this move served to raise the price received by Canadian gold producers from $35 to $38 an ounce. This was good news for the San Antonio mining company.

But the bad news had yet to come.



(CANADIAN MINING JOURNAL VOL. 57, 1936, P. 74)

San Antonio mill 1936.

As men and materials were funnelled into the fighting in Europe, exploration for new reserves decreased. Attempts were made to not only keep miners working but to attract new miners. The young men were not to be swayed from doing their duty in fighting for their country.

Labour shortages became acute and caused exploratory work underground to come to a standstill. Mining supplies were increasingly difficult to find and the mine was forced to reduce the amount of ore milled in an effort to operate efficiently. But even in these tough times, the shareholders of the San Antonio mine saw fit to award Duncan Twohearts, working as a trapper and guide, a lifelong pension in recognition of his contribution to the original discovery of gold in the Rice Lake belt.

(PROVINCIAL ARCHIVES OF MANITOBA) (PHOTO T. DOBSON)

San Antonio "Muckers" Hockey Team 1937.

When World War II ended in 1945 mining operators were hopeful that returning servicemen and new immigrants from Europe would flock to the mines. The labour situation did improve, but only slightly. A more serious problem was the depleted ore reserves due to the absence of exploratory work. But there was more grief when the Canadian dollar was brought back to par with the American dollar in 1946. Canadian gold producers saw their price premium vanish.

The Canadian government provided relief to the struggling industry in 1948 in the form of the Emergency Gold Mining Assistance Act (EGMAA). In reality a subsidy, it could not be presented as such due to the watchful eye of the International Monetary Fund which had elicited agreement from Canada that member countries would not provide a flat subsidy to all gold producers. To do so would in effect be equivalent to increasing the price of gold. Therefore, the EGMAA was by necessity extremely complicated but flexible. The EGMAA was welcomed. It helped gold producers survive the higher labour costs, supply shortages and a fixed price on gold. The Ogama-Rockland mine re-opened between 1948-51 partly due to the assistance. The San Antonio had streamlined operations and it too was a recipient of the EGMAA.

A free market for gold was established in 1951 and gold producers were quick to take advantage by selling their production directly to private buyers. However, the free market collapsed two short years later in 1953 when accepting the EGMAA payments became more profitable than selling gold to private investors. Gold mining in Canada entered a period of decline which was to last for the next 25 years.

The San Antonio company attempted to diversify by staking claims for uranium near Blind River, Ontario and northern Saskatchewan, as well as nickel in northern Manitoba. But these efforts proved unsuccessful. The rich San Antonio ore deposit plunged onto the adjacent property of Forty Four Mines Ltd. at depth. San Antonio Gold Mines next acquired these claims with the hope that they would provide enough ore to support the operations. Development of these claims began in 1952 but proved costly. By 1955, the mine recorded its first loss. Profitability did not return to the mine and the company was sold to eastern interests in 1961.

The road from Pine Falls was extended to Bissett in 1957, ending 40 years of partial isolation. The opening of the road was considered a mixed blessing to the social structure of the community.

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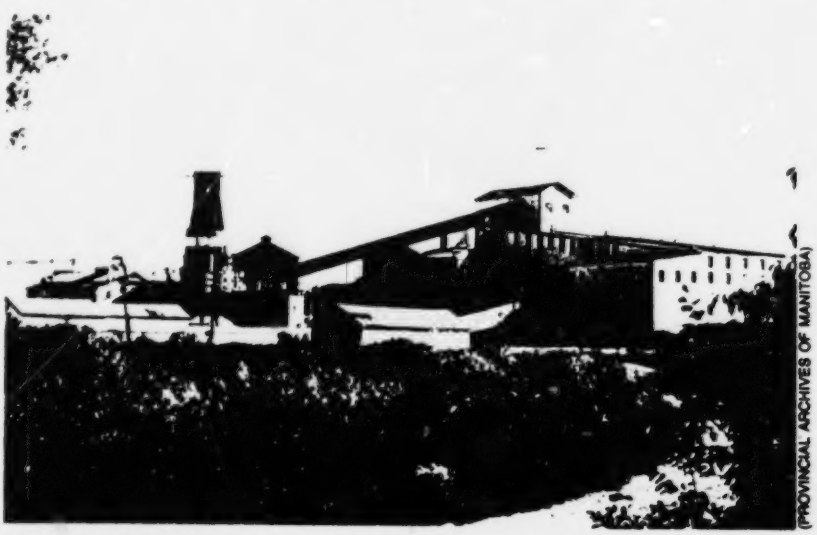


(PROVINCIAL ARCHIVES OF MANITOBA)

San Antonio Mill 1968.

(PHOTO W.K. MYSYK 1986)

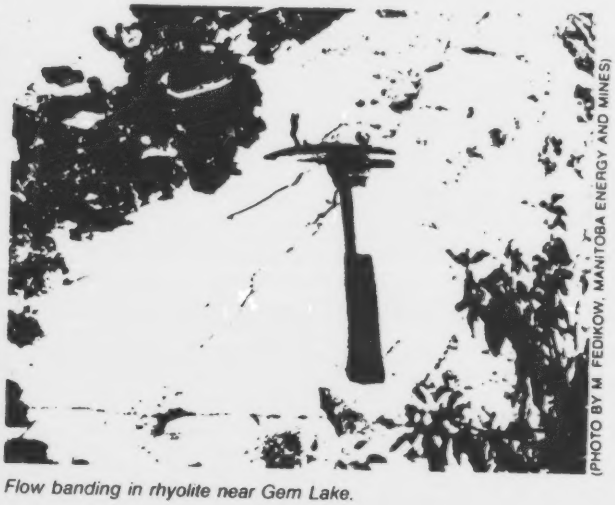
Concrete footings at Gunnar minesite. Field trip stop #15.

(PHOTO W.K. MYSYK 1986)

Pillow basalt at Gunnar minesite. Field trip stop #15.

(PHOTO W.K. MYSYK 1986)

Overall view of the Packsack gold property. Field trip stop #2.



(PHOTO BY M. FEDIKOW, MANITOBA ENERGY AND MINES)

Flow banding in rhyolite near Gem Lake.

(PHOTO W.K. MYSYK 1986)

Steam hoist at Sannorm gold property. Field trip stop #11.

(PHOTO D. OWENS, UNIVERSITY OF MANITOBA)

Folded banded iron formation near Stormy Lake.

Bissett Field Trip Guide

This field trip guide is designed to provide a rudimentary overview of the geology and historical development of the Bissett area. The field trip is self-guiding and all stops are located near major roads for easy access. Location of the outlined field stops may require basic orienteering skills. All road distances are measured in kilometres, but it should be pointed out that vehicle odometers may vary somewhat. Close attention to the site descriptions will aid in locating the stops. All field trip stops are shown on the geological map overleaf.

As with all outdoor activities, certain safety precautions will ensure a successful and enjoyable field trip. Roads in the Bissett area are gravel, so drivers should take special care in dusty, icy, or muddy conditions and always beware of flying stones when passing oncoming traffic. Drivers should be careful to avoid collision with wild animals, especially deer grazing along the side of the road at dawn or dusk. Bad weather and swarms of biting insects are other challenges that field trip participants should come prepared for. Although all stops are fairly easy to locate near the main roads, a compass is recommended for basic orienteering, especially on cloudy days when the sun is not available to readily indicate directions. Precautions should also be taken to avoid personal injury. Abandoned shafts or steep pits should never be entered due to the danger of rock-falls or cave-ins. Broken rock, especially quartz, can be razor sharp, so gloves should be worn when handling rock samples. To avoid serious eye injury, protective goggles or glasses should be worn at all times when rocks are being hammered.

Most of the stops described in this field guide are covered by mining claims, giving the holder exclusive rights to the mineral potential within the claim. In some cases, where the claim is under a production lease or has been owned for a long period of time, the surface property rights may also be held. Some old mine sites are posted "No Trespassing," as noted in the field guide descriptions. In all cases, field trip participants should have permission from either the surface rights or mining rights holder before entering onto a mining claim for the purpose of examining the rocks and minerals. Claim maps and details on the ownership of mining claims can be obtained from the Mining Recorder's Office at 555 - 330 Graham Ave., Winnipeg, Manitoba R3C 4E3 (Phone: 204-945-6532). During field trip stops, participants should show courtesy to the mining claim holders by not tampering with any equipment stored at the site and not littering.

Although the object of the field trip is to examine the geology and history of gold exploration in this area, it should be pointed out that visible gold is not an easy thing to find. Only a miniscule amount of gold is needed for a rock to be considered high grade ore. Many gold mines in Canada have an ore grade of only about seven grams per tonne (0.2 ounces per tone). In many high grade ores, the gold is not even visible to the naked eye. Field trip participants need not be disappointed if they don't locate visible gold. Most of the brassy yellow minerals to be found abundantly in quartz veins on this field trip will be pyrite ("fools gold") and chalcopyrite. But if you find a soft, buttery yellow colored mineral glinting from the rock — congratulations!

The field trip starts on Provincial Road #304 at the Currie Landing Wayside turnoff, 10 km west of Bissett. Driving distances are measured consecutively from 0.0 km at this point. The field trip route follows Provincial Road #304, diverges onto the Quesnel Lake road for several stops, and terminates on Provincial Road #314 near Beresford Lake.

0.0 km
Stop 1
York Shaft: The site of the York shaft, now filled in, is believed to lie just into the bush on the north side of the road about 35 metres east of the junction. Piles of broken rock and a large piece of white quartz may be from these workings. The York shaft was probably sunk on the shear zone which is exposed along the west end of the road cut outcrop, about 66 metres east of the junction. The side road to Currie Landing was part of the early freighting system from the Wanipigow River to Rice Lake and Quesnel Lake.

Proceed east along Provincial Road #304 for 4.6 km. Turn right on the Quesnel Lake road and drive for a distance of 5.3 km. Turn right on a side road and, depending on road conditions, drive or walk approximately 1.5 km south to the Packsack shaft.

9.9 km
Stop 2
Packsack Shaft (posted no trespassing): the Packsack workings occur along the north side of a 30 metre high hill. The property was first staked in 1917 and had a 160 metre deep shaft sunk in 1936. Published ore reserves on this property stand at 21,800 tonnes (24,000 tons) grading 12 grams per tonne (0.36 ounces per ton). A small mining operation was conducted on this property in 1985. Several hundred tonnes of ore was removed from the Big Dome vein by an open cut into the hill, immediately southwest of the shaft. The tailings from milling this ore, a fine white sand, can be found at the bottom of the hill. Rock dumps on this property offer interesting collecting for the rock hound.

Return to the Quesnel Lake road. Turn right and proceed a further 3.1 km along the Quesnel Lake road.

13.0 km
Stop 3
Yankee Girl Vein: This vein is easily recognized as a prominent outcrop of white quartz that extends across the road. The Yankee Girl quartz vein is up to 20 metres wide and is largely devoid of any mineralization. It is a good example of a "barren" quartz vein.

Continue southeast along the Quesnel Lake road for 1.8 km to a small road on the left side of the Quesnel Lake road.

14.8 km
Stop 4
Gold Pick Vein: A large trench has been cut into the hill on a mineralized zone about 50 metres north of the Quesnel Lake road. Rock bolts have been installed in the side of the cut to prevent collapse of the "hanging wall" into the trench. Rock bolting is commonly used in mines to prevent collapse of unstable portions of the workings.

Proceed southeast for an additional 1.7 km along the Quesnel Lake road to a small road on the left (east) side. Walk or drive about 250 metres to the east along this side road.

16.5 km
Stop 5
Gold Lake (Pilot-Smuggler) Shaft: The Gold Lake shaft, now capped by concrete, was sunk along a quartz-bearing section of a long fracture in the volcanic rocks, the Pilot Smuggler shear zone. This shear zone, with minor quartz veining, is exposed in a series of trenches extending to the north-northwest in the bush and along the road to the south-southeast of the shaft. The large, oblong-shaped pieces of corrugated metal along the edge of the road are casings from early electrical transformers.

Return to the Quesnel Lake road and proceed south for 5.4 km to the picnic site at Quesnel Lake.

21.9 km
Stop 6
Quesnel Lake Landing: The landing at Quesnel Lake was heavily travelled during freighting to the early gold mines. Today it is widely used by fishermen and canoeists for access to the lakes along the Manigotagan River system. At this point we have travelled south of the gold-bearing volcanic rocks of the Rice Lake greenstone belt into the Manigotagan gneissic belt. The rocks exposed in outcrops around the picnic site are known as sedimentary gneisses. They were formed as sandy and muddy sediments deposited in an ocean basin adjacent to the volcanic belt. The original bedding layers can still be seen in some outcrops. These sediments were buried deeply in the earth's crust where they were subjected to great heat and pressure, resulting in partial melting. This melted portion is now visible as light-colored granite, which occurs as sills parallel to bedding and dikes across-cutting bedding.

Return northwest on the Quesnel Lake road for 17.3 km to the junction with Provincial Road #304. Turn right and drive east for 5.3 km to the Wallace/Long Lake turnoff in the town of Bissett. Proceed straight ahead on Antonio St. for 0.1 km. Turn right onto Mite Ave. at the town picnic site and

RICE LAKE GOLD BELT

LEGEND

Wanipigow River Plutonic Complex: quartz diorite, granodiorite

Manigotagan Gneissic Belt: metasedimentary gneiss, migmatite, granodiorite, granite, pegmatite

RICE LAKE GREENSTONE BELT

Plutonic Rocks: quartz diorite, granodiorite

Volcanic and Sedimentary Rocks: basalt, andesite, dacite, rhyolite; conglomerate, greywacke, shale; minor associated intrusive rocks

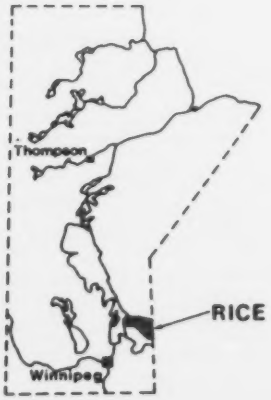
SYMBOLS

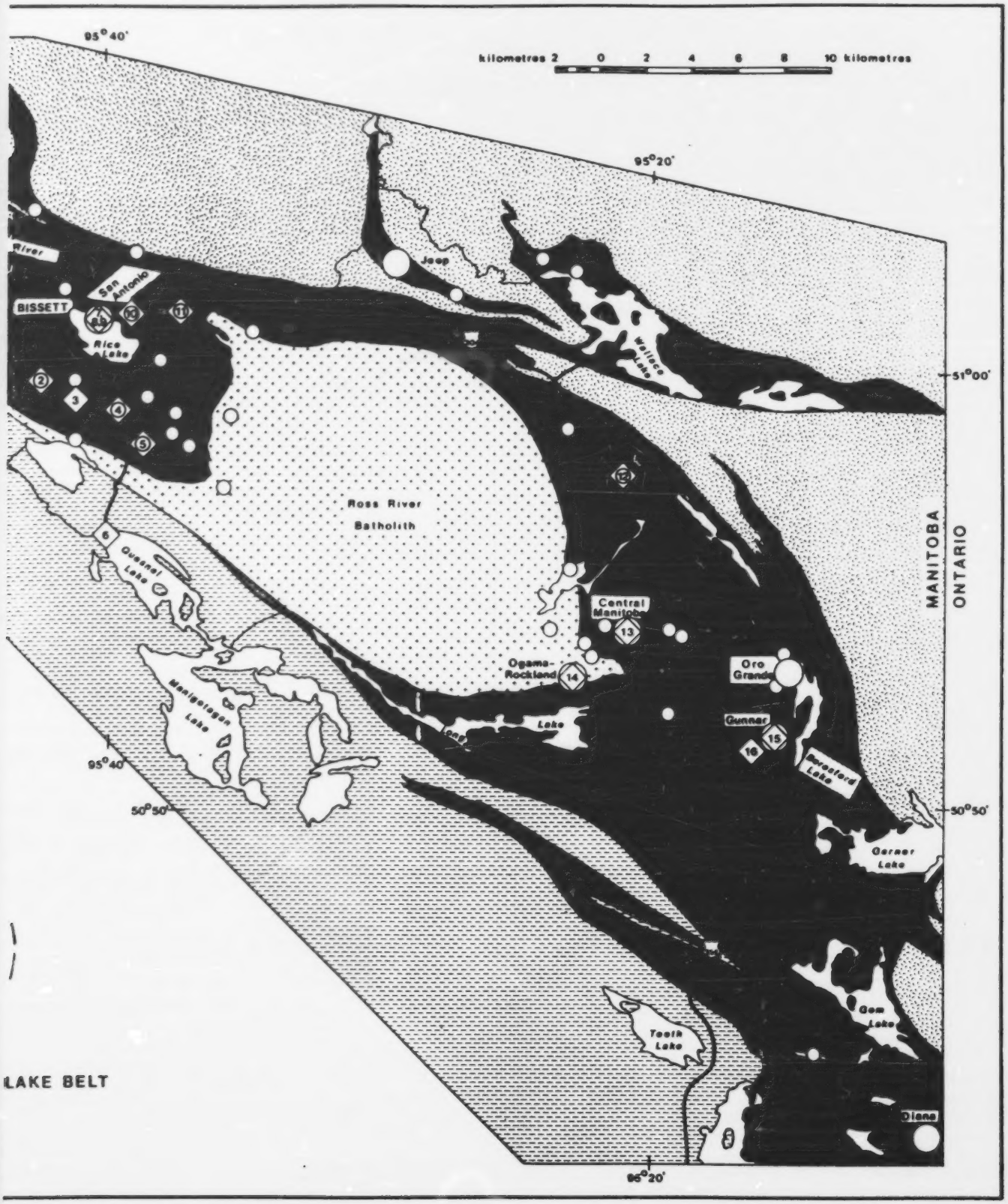
Former producing gold mine

Gold occurrence

Field trip stop

Provincial road




95°40'
kilometres 2 0 2 4 6 8 10 kilometres
95°20'
River
San Antonio
BISSETT
Rice Lake
Jeep
Wallace Lake
51°00'
Ross River
Batholith
MANITOBA
ONTARIO
Quesnel Lake
Central Manitoba
Ogama-Rockland
Oro Grande
Gunnar
Mandelagan Lake
Lake
Beresford Lake
95°40'
50°50'
50°50'
Garner Lake
Gem Lake
Tooth Lake
Diana
95°20'
LAKE BELT

proceed straight ahead for 0.1 km to the parking lot beside the Bissett Curling Rink and Recreation Center. Walk down to the shore of Rice Lake behind the Curling Rink and to the east for about 40 metres along the lakeshore behind the cottages to the site of the Gabrielle shaft and stamp mill. The town of Bissett owns this narrow strip of land along the lakeshore and hopes to build a public walkway to this historic site in the near future.

44.7 km
Stop 7
Gabrielle Shaft: This first gold discovery of the Bissett area was made at this site on the shore of Rice Lake in 1911. Subsequent finds eventually resulted in development of the San Antonio mine less than a kilometre to the east. A single stamp mill is set up on display here at the Gabrielle shaft. Stamps such as these were used extensively for milling gold ores until about 50 years ago.

Return to the junction of Mite Ave. and Antonio St. Turn right and proceed east on Antonio St. for 0.4 km.

45.2 km
Stop 8
Stamp Mill and Discovery Post: A two-stamp gold mill, dating from the early part of the century is set up on display on the north side of the road. The building behind the stamp mill was used as the women's residence for many years. The site of one of the original discovery posts for the San Antonio claim is located another 25 metres up the hill to the north on the east side of the road past the rock outcrops. This post marks the common boundary between four of the original mining claims in the area, including the San Antonio claim, Lot 46.

Proceed another 0.2 km east on Antonio St. to the entrance of the San Antonio mine.

45.4 km
Stop 9
San Antonio Mine (posted no trespassing): The historic San Antonio mine commenced production in 1932 and up until its closing in 1968, produced 37,317 kg (1,199,878 ounces) of gold. A further 349 kg (11,210 ounces) of gold was produced when Brinco Mining Ltd. operated the mine from 1982 to 1983. The large buildings that can be seen from the road enclose the headframe over the shaft (foreground) and mill (background). The underground workings were developed to a depth of 1.6 km and extend northeast for a horizontal distance of almost two kilometres.

Return on Antonio St. for a distance west of 0.7 km to the main junction to Wallace/Long Lakes. Turn right and proceed east out of the town of Bissett on Provincial Road #304 for a distance of 1.9 km. Stop at a small road heading south in a low-lying, swampy area. Walk south about 200 metres to the site of the Goldfield shaft.

48.0 km
Stop 10
Goldfield Shaft: The capped Goldfield shaft is one of several in this immediate area that were sunk between 1913 and 1915. A small stamp mill processed development ore on the Goldfield property during this time period. This two-stamp mill is now on display in Bissett and was included in Stop 8. Much of the rock lying around the site consists of a distinct porphyritic andesite volcanic rock, with well-formed feldspar crystals in a dark fine-grained matrix.

Proceed east on Provincial Road #304 for a distance of 2.7 km to a side road on the right (south) side of the main road. The side road immediately splits, with one road going to the left (southeast) and a narrow grassy road to the right (southwest). Walk along the narrow grassy road up onto the outcrop to the southwest for a distance of about 250 metres to the site of the Sannorm shaft.

50.7 km
Stop 11
Sannorm Shaft: Over 9000 metres of core drilling has been undertaken on the Sannorm property since 1934, exploring a gold-bearing quartz vein to a depth of over 300 metres. Recent interpretations have suggested that the Sannorm property lies within an extension of the same rock units that host the San Antonio deposit at Rice Lake. Immediately west of the Sannorm shaft, an old rusting steam-powered hoist remains as a tribute to previous development efforts.

Proceed east on Provincial Road #304 for a total of 31.1 km, passing a gravel pit at 51.7 km, a side road to the Birch Falls picnic site at 57.1 km, and the Bissett airstrip at 65.7 km. The area around the airstrip is underlain by an extensive area of sandy glacial till. A side road to the popular Wallace Lake cottage area, campground, and boat launch is at 76.4 km.

Continue southeast on Provincial Road #304 to 81.8 km, where a rough bush road goes west from the outside of a sharp bend in the road. Walk 50 metres west into the bush to a series of trenches.

81.8 km
Stop 12
Moore Lake Shaft (posted no trespassing): The original Moore Lake shaft was sunk in 1929 but has since been filled in. A series of trenches expose a quartz-bearing shear zone in chloritic volcanic rocks. The shear zone trends south-southeasterly and has been exposed for a length of over 100 metres. The quartz veins are locally mineralized with pyrite and chalcopyrite.

Drive south on Provincial Road #304 for 8.3 km to the site of the Central Manitoba Mine.

90.1 km
Stop 13
Central Manitoba Mine (Kitchener Shaft): Provincial Road #304 runs across the old tailings from the gold mill operated by Central Manitoba Mines from 1927 to 1937. A total of 395,275 tonnes of ore was mined, producing 4977.5 kg (160,034 ounces) of gold. The Kitchener Shaft and the old mill site are located about 150 metres west of the road on the south side of the tailings. The old dumps provide good collecting for rock hounds. Much of the quartz from this deposit is smokey grey in color, with abundant pyrite and chalcopyrite. The town of Wadhope, now entirely abandoned, used to lie immediately southwest of the mine site, toward the road.

Proceed south on Provincial Road #304 past the road to the Tene and Growler Shafts at 90.6 km and "Lone Grave" at 92.8 km. The cross marks the final resting place of a Finnish miner, Tovio Mackie, who died in 1934. Mackie had been working at the Central Manitoba Mine for only a couple of months before he drowned in Long Lake. Turn right toward Long Lake at the junction of Provincial Roads #314 and #304. Keep to the right hand road past the lodge on Long Lake. Proceed to a Parks Branch wooden headframe marker at 96.9 km and proceed north for a further 1.3 km on a narrow bush road to the site of the Ogama shaft.

98.2 km
Stop 14
Ogama-Rockland Mine (Ogama Shaft): The Ogama and Rockland veins were originally discovered in 1915. In 1942 Ogama-Rockland Gold Mines started production, hauling 3738 tonnes of high grade ore to the Gunnar mill (Stop 15) at Beresford Lake. An additional 129,948 tonnes of ore were milled on site from 1948 to 1951. Total production from the Ogama-Rockland Mine was about 50,000 ounces (1555.15 kg) of gold. The veins on this property occur in a quartz diorite phase of the Ross River pluton, rather than the volcanic rocks noted at all previous stops.

Return to the junction of Provincial Roads #314 and #304. Proceed south for 4.9 km on Provincial Road #314 to the Beresford Lake junction. Turn left toward Beresford Lake and drive 1.5 km to a side road on the left (north) side of the Beresford Lake road. Walk or drive about 100 metres north to the site of the Gunnar Mine.

109.7 km
Stop 15
Gunnar Mine: The Gunnar Mine produced 3101 kg (99,713 ounces) of gold from 259,681 tonnes of ore between 1936 and 1941. Rock dumps around the mine site offer interesting picking for the collector. The best gold values are reported to be in grey cherty quartz containing finely granulated sulphides. Outcrops around the old concrete foundations near the capped shaft show excellent examples of pillowed basalt. This type of rock is formed when molten lavas are extruded in the ocean bottom. The cold ocean water causes the lava to form discrete tubular and pillow shaped forms which are readily obvious in the outcrops.

The Beresford Lake cottage area, boat launch, and camp ground is located a further 1.1 km east on the Beresford Lake road. Return to the junction of Provincial Road #314 with the Beresford Lake road. Turn left (south) and drive up the hill for about 0.1 km to the road cut outcrop on the left (east) side of the road.

111.3 km
Stop 16
Kink Banding: A chloritic shear zone with minor quartz veining is exposed along the edge of the road cut outcrop. A late, cross-cutting tectonic adjustment had deflected the original shear fabric in the rocks, producing excellent "kink banding."

(PHOTO W.K. MYSYK 1986)

San Antonio Mine 1986. Field trip stop #9.

The finances of the San Antonio Gold Mines were in a precarious state during the early 1960's. To prevent the closure of the mine, the Manitoba government stepped in to extend a line of credit to the company. The mine struggled on until 1968 when a fire destroyed the surface hoist and operations shut down.

New Forty Four acquired control of the property after the San Antonio Gold Mines Ltd. declared bankruptcy following the 1968 fire. In 1972, Chemalloy Minerals Ltd. took a 60-day option on the property but did not exercise it.

In the meantime, the United States had allowed the price of gold to float and find its own level. There was a generally steady increase in the gold price, with fluctuations for about a decade.

Gold exploration began to increase in the Rice Lake area in 1977 as the price of gold increased and peaked at $850 an ounce in January 1980. Although the price declined afterwards, it has remained high enough to ensure continued gold exploration.

New Forty Four Mines interested Brinco Mining Ltd. in a 50-50 joint venture development in August 1980. The joint venture resulted in additional ore being outlined and a 250 tpd mill was put into operation. Custom milling was offered to anyone who had ore and wanted it treated. The mill closed in May 1983 after the grade of the ore in the upper levels of the mine proved disappointing.

The property sat idle until 1985 when San Antonio Resources acquired an option to conduct exploration. By August 1986, 20,088 feet of underground drilling in 22 holes had been completed. It is still too early to know what will happen next until an economic assessment of this recent work is completed.

Local Geology

Bissett is located approximately 160 km (100 miles) northeast of Winnipeg, in the Rice Lake greenstone belt which forms a continuous unit from Lake Winnipeg to the Ontario border. Greenstone belts comprise metamorphosed volcanic rocks (basalt, andesite, dacite, rhyolite), their water-deposited sedimentary derivatives (conglomerate, greywacke, argillite, iron formation) and both associated and younger intrusive igneous rocks (gabbro, diabase, diorite, granite). Occupying a large area in the centre of the Rice Lake greenstone belt is the Ross River Batholith, a major quartz diorite intrusion.

All known gold deposits in Manitoba occur only in Precambrian bedrock and the distribution of deposits is closely linked to the occurrence of greenstone belts (often in quartz veins within shear and/or fracture zones) found throughout the Precambrian Shield.

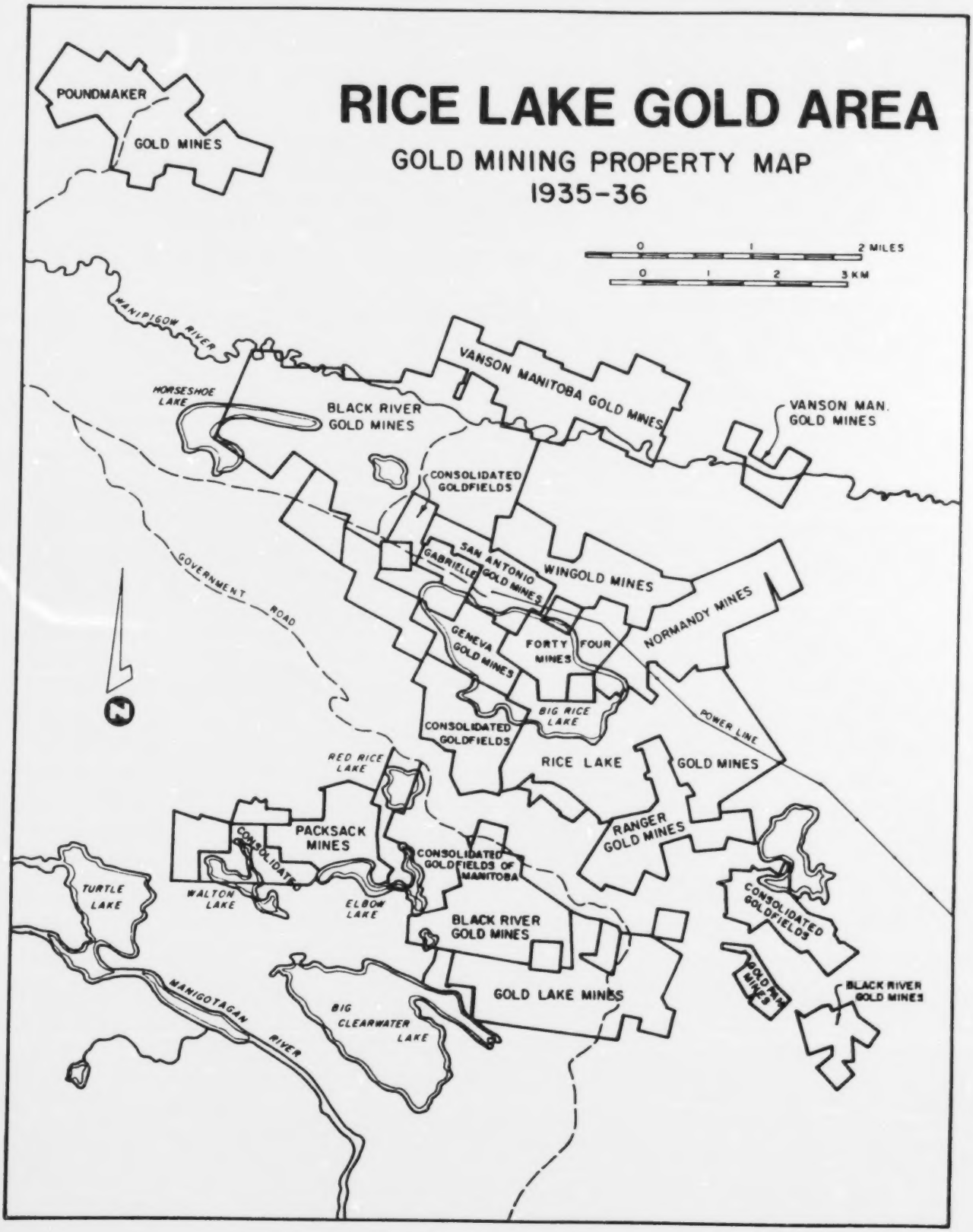
In the vicinity of Rice Lake, bedrock is generally well exposed with a relief of up to 30 metres (91.44 feet). Glacial striae occur on many outcrops indicating ice-sheet movement of south 60 degrees west in Pleistocene times (about 15,000 years ago). Retreat of the glaciers produced the huge glacial Lake Agassiz that covered much of southern Manitoba, northwestern Ontario, North Dakota and Minnesota. Deposits of sand, silt and clay that cover part of the Bissett-Rice Lake area were formed in Lake Agassiz.

A more complete description of gold mining in Manitoba may be found in *Gold Mines of Manitoba* by J.W. Stewart. The following geological descriptions of the producing mines in the Bissett area are taken mainly from Stewart's pamphlet.

Other sources of information are available for further reading, including government geological reports and maps, mining and exploration periodical publications (Manitoba's Precambrian, later called the Precambrian, Canadian Mining Journal, etc.) and annual reports of the mining companies themselves.

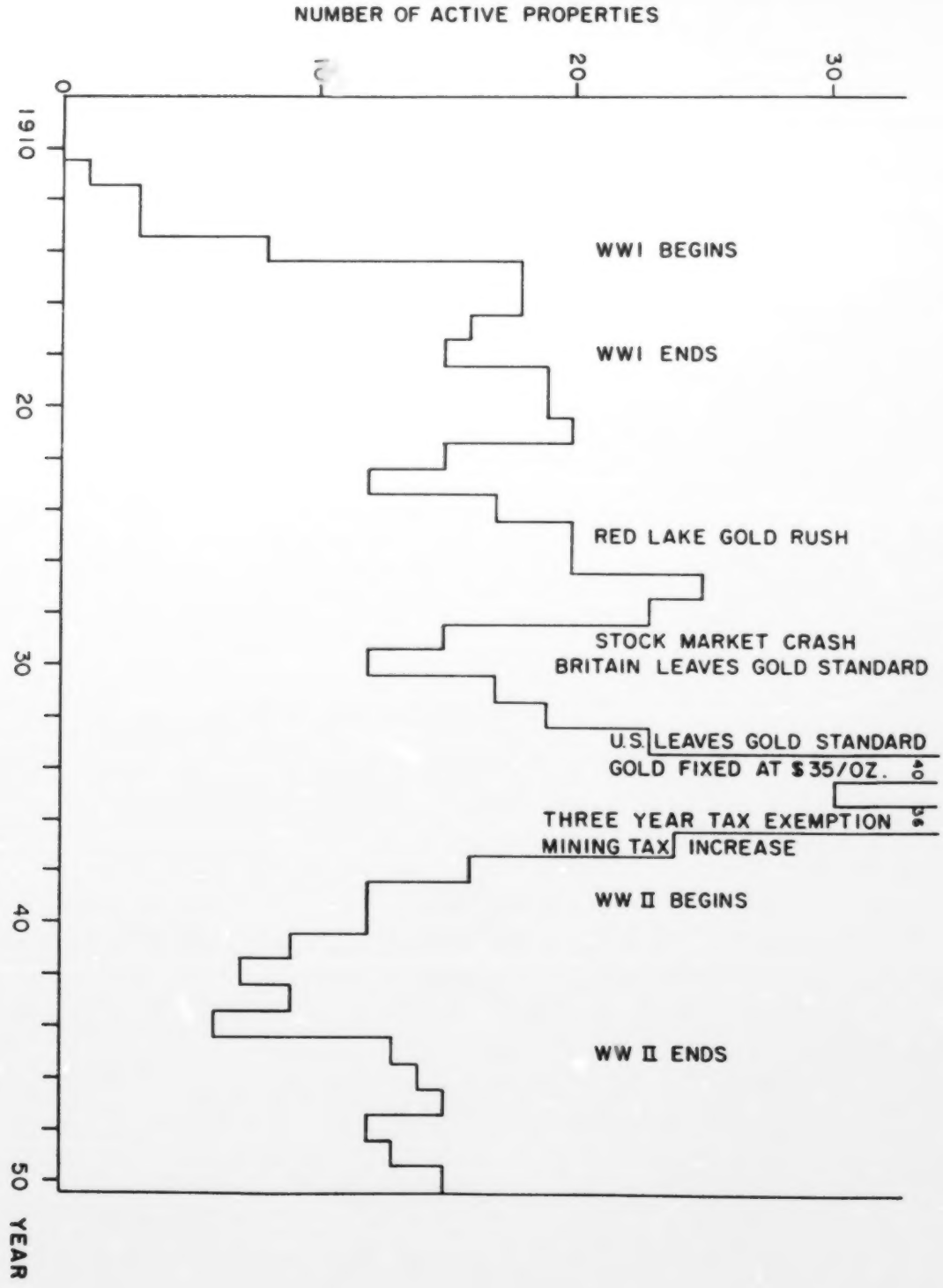
San Antonio Mine

Gold mineralization occurs in quartz veins within a mafic igneous rock that has traditionally been considered a diabase sill (but may include volcanic flows and sedimentary rocks) that dips 45° to the northeast. The quartz veins contain the sulphide minerals pyrite, chalcopyrite, sphalerite and galena (the latter three being present in minor amounts only); ankerite and albite also occur. Carbonate, albite and pyrite are alteration minerals that have developed in the wall rock. Gold occurs mainly in the vein pyrite and rarely as free gold. A mass of pure gold weighing 6.564 kg (14.44 pounds) was discovered during mining in 1961 and is now in the collection of the National Museum of Natural Sciences in Ottawa. The gold:silver ratio in the mine averaged 6:1. The productive veins are largely confined to a thicker part of the sill and essentially restricted to the sill itself. The quartz veins form four groups or sets, oriented in four different attitudes and developed in shear and fracture zones which cut the sill. Only two sets of veins have been mined: (1) the northwest trend-


RICE LAKE GOLD AREA
GOLD MINING PROPERTY MAP
1935-36
POUNDMAKER
GOLD MINES
0 1 2 MILES
0 1 2 3 KM
MANIPIGOW RIVER
HORSESHOE LAKE
BLACK RIVER GOLD MINES
VANSON MANITOBA GOLD MINES
VANSON MAN. GOLD MINES
CONSOLIDATED GOLDFIELDS
GOVERNMENT ROAD
SAN ANTONIO GOLD MINES
GABRIELLE
WINGOLD MINES
NORMANDY MINES
GENEVA GOLD MINES
FORTY FOUR MINES
BIG RICE LAKE
POWER LINE
CONSOLIDATED GOLDFIELDS
RED RICE LAKE
RICE LAKE GOLD MINES
PACKSACK MINES
CONSOLIDATED
RANGER GOLD MINES
CONSOLIDATED GOLDFIELDS OF MANITOBA
TURTLE LAKE
WALTON LAKE
ELBOW LAKE
BLACK RIVER GOLD MINES
CONSOLIDATED GOLDFIELDS
GOLD LAKE MINES
BLACK RIVER GOLD MINES
MANIGOTAGAN RIVER
BIG CLEARWATER LAKE

HISTORICAL GOLD PRODUCTION AND ACTIVITY CHART

Historical Gold Production and Activity Chart for the Rice Lake Greenstone Belt (1910-1950).



ing ("38 type") veins dip to the northeast and are stockworks in fracture zones, and (2) the northeast trending ("16 type") veins dip to the northwest and occur in shear zones. Two other sets of veins occupy shear zones and brittle fracture zones. A total of 132 veins were worked between 1932 and 1968.

Mining operations extended to a vertical depth of 1639 m (5376 ft) by a succession of internal shafts interconnected by horizontal haulage ways. Reserves in the mine have been estimated to be 726,000 tonnes (800,000 tons) with an average grade of 7.9g/tonne (0.23 oz/ton). The mill was famous for its high recovery of about 98% gold from ore assaying about 9.9g/tonne (0.288 oz/ton). Production figures are listed in Table 1.

(PHOTO W K MYSYK 1986)

Ball mill, Central Manitoba Mines. Field trip stop #13.

Central Manitoba Mines

The Kitchener Mine was the first of eight small mines of the Central Manitoba Mines to produce gold over the period 1927 to 1937. Five shafts were sunk along a narrow 2.7 km (1.7 mile) shear zone and over 16 km (9.6 miles) of tunnels were driven.

The deposits occur at or close to the contact between volcanic rocks and a gabbro sill. A band of cherty tuff hosts several of the more productive veins (Kitchener, Growler, Eclipse, and Tene) which occupy subparallel shear zones and are flanked by quartz-chlorite-carbonate-pyrite alteration zones in the wall rock. The Tene 6 and Hope veins are hosted by gabbro-diabase. Sulphide minerals are mainly pyrite and chalcopyrite, with minor pyrrhotite. Gold occurs in pyrite and chalcopyrite, and also as microscopic free gold.

The mining plant and equipment were shipped in from Solo-Oro Grande claims in 1925. Production from the deposits occurred from 1927 to 1937. The mine was closed in 1937 because of the progressive decrease in gold content with depth. The property was inactive for 9 years until 1946 when 12 drill holes were put down. No further exploration was conducted until

TABLE 1. PRODUCTION FIGURES FOR BISSETT AREA GOLD MINES

MINE	Gold Recovered (Troy ounces)	Silver Recovered (Troy ounces)	Average Grade Au (oz/ton)	Years in Production
San Antonio (incl. Forty-Four)	1,330,000*	192,205	0.27	1932-68
Central Manitoba	159,252	26,032	0.35	1927-37
Gunnar	101,463	?	0.34	1936-41
Ogama-Rockland	45,343	?	0.33	1942 1948-51
Jeep	13,629	?	0.77	1948-50
Diana	6,117	375	0.33	1928-32 1934-36** 1937-41
Solo-Oro Grande	5,166	482	0.33	1932-34 1938-40**

*Original figure of 1,199,878 revised by C. Gibson, former Mine Geologist at San Antonio.
**Major production period.

(PHOTO W.K. MYSYK 1986)

Concrete footings and capped shaft at the Gold Lake property. Field trip stop #5.

(PROVINCIAL ARCHIVES OF MANITOBA)

Central Manitoba Mine circa 1935.

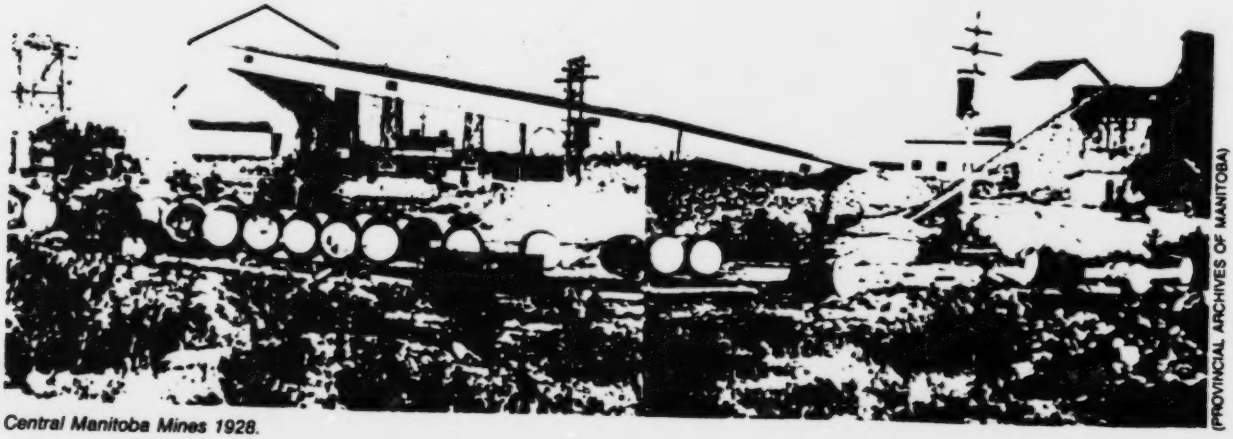
1977 when a minor amount of trenching and sampling was done. Geophysical surveys, geological mapping and geochemical sampling were conducted in 1981 followed by a 10 hole diamond drilling program in late 1984.

Gunnar Mine

The host rocks of the Gunnar Mine, near Beresford Lake, are basalt flows; distinct pillow structures in the lavas indicate underwater volcanic eruption. A large dyke-like body of albite granite cuts the volcanic rocks. Quartz lenses, veins and stockworks, seldom more than 1 m (3.28 ft) in width, occur in a group of shear zones that cut both the volcanic rocks and granite. Mineralization occurs mainly in one shear zone that crosses the southern end of the granite. Ore grade mineralization is confined to the basalt host rock and the productive ore bodies are near the margin of the granite. Ore minerals are mainly pyrite with minor sphalerite, pyrrhotite, marcasite and galena. Gold occurs mainly as a pure metal in quartz and is often visible to the unaided eye. Gangue (non-ore) minerals are mainly quartz, iron carbonate, calcite, albite, sericite and tourmaline, plus rare fuchsite. The sheared wall rocks contain strong chlorite-carbonate-pyrite alteration.

Gunnar produced from 1936 to 1941. Part of the property was staked in 1921 and part in 1933. It was not until after the claims were consolidated that existence of a continuous mineral showing was established.

An attempt was made in 1979 to process the mine tailings. Esso Resources Canada Limited conducted line cutting, geological mapping, sampling and geophysical surveys in 1980 and 1981. Highmark Resources and Homestead Resources carried out tailings sampling, geophysical surveys, soil sampling and prospecting in 1984.



(PROVINCIAL ARCHIVES OF MANITOBA)

Central Manitoba Mines 1928.

Ogama-Rockland

The host rock at the locality is quartz diorite of the Ross River Batholith in contrast to the geological setting of most other deposits in the Rice Lake area. Both deposits are quartz veins occurring in shear zones about 500 m (1640 feet) apart. The Ogama vein is generally less than 30 cm (1 ft) wide, and the Rockland vein ranges from 30 cm (1 ft) to almost 1 m (3.28 ft). The ore minerals consist mainly of pyrite and chalcopyrite, with minor sphalerite, galena and arsenopyrite. Gangue minerals are quartz with minor sericite. Free gold has been observed in the dump. Altered wall rock contains quartz, sericite, carbonate and pyrite with rare chlorite.

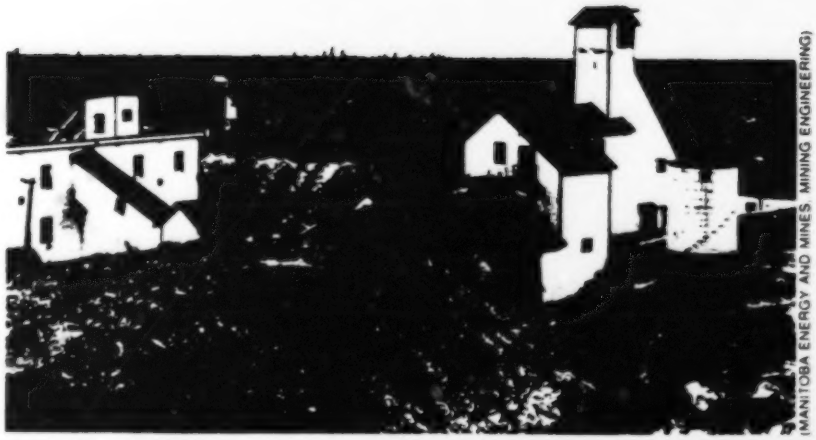
Claims were first staked in 1915, with surface exploration conducted in 1925, afterwhich the option was dropped. Activity began again in 1940 with minor production in 1942. The ore was hauled by tractor to the Gunnar mill. Ogama-Rockland Gold Mines purchased the mining plant, equipment, and 30 buildings from Gunnar Mine in 1945 and moved the structures in 1946. Gold production began again in 1948 and lasted until 1951.

Minor amounts of exploration have been conducted over the years including at least one drill hole in 1968; five drill holes in 1973; geophysics in 1979-80; geophysics, geochemistry and geological mapping in 1981-82; a custom milling study of surface rock in 1982; and three drill holes in 1984.

Jeep

The deposit consists of several lens-shaped quartz veins, generally less than 0.5 m (1.64 ft) thick, occupying parallel shear zones in gabbrodiorite. Pyrite is the main sulphide mineral with minor pyrrhotite, arsenopyrite and chalcopyrite. Scheelite occurs in small amounts. The gangue is almost entirely quartz. Silicification is the main type of wall rock alteration. Carbonate-chlorite-pyrite alteration occurs in sheared wall rock. Gold occurs both in the native form and also associated with arsenopyrite.

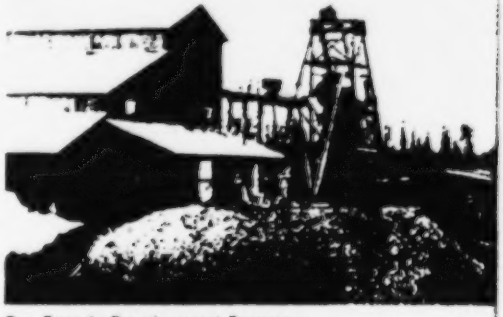
San Antonio Gold Mines Limited formed Jeep Gold Mines Limited to develop the 12 Rice Gold claims. The mine was in production from February 26,1948, to December 21, 1950. Mining was stopped because the principal ore veins did not continue at depth. Minor amounts of exploration work were conducted in 1958, 1959 and 1960. Four diamond drill holes were put down in 1976 by Transtide Industries, but the claims were cancelled. Augusta Gold Mines conducted prospecting and geophysical surveys in 1981 and 1982.



(MANITOBA ENERGY AND MINES, MINING ENGINEERING)

Gunnar Mine Mill 1935.

(CANADIAN MINING JOURNAL, VOL. 55, 1934, P. 77)



Oro Grande Development Company mill near Beresford Lake.

Diana

The deposit consists of mineralized quartz veins occupying shear zones in a gabbro sill. The sulphide minerals are mainly pyrite and pyrrhotite with lesser chalcopyrite, arsenopyrite, sphalerite and galena. Free gold has been observed in the dump. Gangue minerals are ankerite, calcite, chlorite, and minor tourmaline. The sheared wall rock displays chlorite-carbonate-pyrite alteration.

The first significant work was conducted in 1926 and production began in 1928 continuing sporadically until 1938 when the mine became inactive. A small amount of gold and silver were recovered during surface clean up operations in 1940 to 1941. A minor amount of trenching, geophysics and diamond drilling (3 holes) was conducted between 1959 and 1977.

Solo-Oro Grande

Gold mineralization occurs in weak, discontinuous systems of quartz stringers and lenses in shear zones that cut a gabbro sill. Sulphide minerals are pyrite, chalcopyrite, pyrrhotite and sphalerite. Gold is erratically distributed, commonly as free native metal. Altered wall rock consists mainly of quartz-carbonate-chlorite-pyrite with minor biotite and specular hematite.

Claims were staked in 1919 and 1923, and a plant was installed in 1927. Results were not encouraging and work was abandoned in 1928. Production finally began in 1932 and lasted until 1934. Several company name changes, claim transfers and options occurred over the years. Pro-

(©PROVINCIAL ARCHIVES OF MANITOBA)

Gunnar Gold Mine 1937

duction occurred again from 1938 to 1940, but operations were suspended when assay results showed gold content to be spotty and erratic. A minor amount of work has been carried out more recently including a seven hole drill program (1962) and geophysics, prospecting, soil and tailings sampling in 1984.

Historical Overview

The Bissett area was the first gold mining camp in Manitoba. The discovery of gold at Rice Lake in 1911 was followed by small mining operations at several locations in the belt. High-grading commenced on the Gabrielle in 1912, the Goldfields in 1914, and the Gold Pan in 1915. Exploration and development activity decreased only slightly during the First World War. Rumours of a gold discovery in Red Lake area of northwestern Ontario drew people away from Rice Lake in 1922, but activity soon recovered.

Substantial gold production commenced in 1927 when Central Manitoba Mines began operation of the Kitchener Mine at Wadhope several kilometers northeast of Long Lake. The Tene, Growler and Hope veins (along strike with the Kitchener) were put into production soon after.

The number of active exploration programs in the Rice Lake belt plummeted following the stock market crash in 1929 due to the lack of investment capital. A period of instability in world financial markets followed. Britain and United States left the gold standard in 1931 and 1933, respectively.

In 1934, however, the United States increased the price of gold from $20 to $35/oz. As a result, gold exploration in the Rice Lake belt and elsewhere in Canada expanded, while the general economy laboured under depression. Production commenced at the San Antonio and Oro Grande mine in 1932, the Diana in 1934, and the Gunnar mine in 1936. From its start in 1932, the San Antonio operated continuously and eventually accounted for 80% of the gold production of the Rice Lake belt. A total of 37,784.1 kg (1,330,000 oz.) of gold and 5,978.2 kg (192,205 oz.) of silver were ultimately won from the high-grade San Antonio ores.

The Second World War broke out on the European mainland in 1939, and soon had a profound influence on gold mining in Canada. The Canadian government instituted a 10% devaluation of the Canadian dollar, which had been at par with the American dollar. This, in effect, raised the price received by Canadian producers from $35 to $38/oz. As a result of these factors, Canadian gold production increased significantly during the early war years. However, as men and materials were funnelled into the fighting in Europe, exploration for new reserves decreased.

Hostilities ceased in 1945 and exploration activity in the Rice Lake belt recovered. When the Canadian dollar was brought back to par with the American dollar in 1946, however, Canadian gold producers saw their price premium vanish. The Federal government provided relief to the struggling Canadian gold mining industry in 1948 with the introduction of the Emergency Gold Mining Assistance Act (EGMAA).

The 1950's saw the slow decline of gold production due to the fixed price of gold and rising mining costs, which narrowed the profit margin. A temporary stimulus to gold mining was provided in 1951 when the Canadian government permitted free market sales of gold bullion. This free market for gold collapsed in 1953 and gold mining in Canada entered a period of decline which lasted until the late 1970's.

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